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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,339	08/26/2003	Jung-Tao Liu	29250-001071/US	3513
7590 04/10/2008 HARNESS, DICKEY & PIERCE, P.L.C. P.O. Box 8910 Reston, VA 20195				
EXAMINER ADDY, THUAN KNOWLIN				
ART UNIT		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/647,339

**Applicant(s)**

LIU, JUNG-TAO

**Examiner**

THJUAN K. ADDY

**Art Unit**

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment filed on December 26, 2007 has been entered. Claims 1, 9, and 20 have been amended. No claims have been cancelled. No claims have been added. Claims 1-20 are still pending in this application, with claims 1, 9, and 20 being independent.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 9, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheng et al. (US Patent Application, Pub. No.: US 2005/0043045 A1).
3. In regards to claims 1, 9, and 20, Cheng discloses a method for transmitting control signals in a communication network (See Abstract), comprising: transmitting only control signal data related to scheduling for uplink transmission of packet data over a single control channel (See Fig. 2A and control channel 280), the single control channel having physical structure and data arrangement therein corresponding to the control

Art Unit: 2614

signal data transmitted on the single control channel (See pg. 2-3, paragraph [0027] and pg. 4, paragraph [0038]).

4. In regards to claim 2, Cheng discloses the method, wherein the control channel carries different control signal data based on the transmission mode (See pg. 3, paragraph [0031]).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-8 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al. (US Patent Application, Pub. No.: US 2005/0043045 A1), in view of Naim et al (US Patent Application, Pub. No.: US 2002/0093953 A1).

6. In regards to claim 3, Cheng discloses all of claim 3 limitations, except the method, wherein transmitting control signal data further includes transmitting one or more of medium access control buffer status data, transport format data, transport block size data and redundancy data, if the transmission mode is a scheduled transmission mode. Naim, however, does disclose the method, wherein transmitting control signal data further includes transmitting one or more of medium access control buffer status data, transport format data, transport block size data and redundancy data, if the transmission mode is a scheduled transmission mode (See pg. 3, paragraph [0032]).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate this feature within the method, as a way of allocating resources for data streams and allocating resources in a wireless system where the data includes an indication of its own resource needs.

7. In regards to claims 4 and 12, Naim discloses the method and control channel, wherein the scheduling mode specifies that users transmit on the uplink, start times for the user and duration of uplink transmission (See pg. 2, paragraph [0027]).

8. In regards to claims 5 and 13, Naim discloses the method and control channel, wherein transmitting control signal data further includes transmitting one or more of, transport format data, transport block size data, HARQ channel ID data and an indicator indicating whether data carried on a corresponding data channel is a new packet or a re-transmission of a previous packet, if the transmission mode is a rate-controlled transmission mode (See pg. 1, paragraph [0016] and pg. 2, paragraph [0026]).

9. In regards to claims 6 and 14, Naim discloses the method and control channel, wherein the rate-controlled mode specifies an allowed data rate for a user, the user transmitting autonomously, subject to the allowed data rate (See pg. 2, paragraph [0027]).

10. In regards to claims 7, 11, and 15, Naim discloses the method and control channel, wherein transmitting control signal data further includes transmitting one or more of medium access control (MAC) buffer status data, pilot transmit power data and data related to priority of a packet in the MAC buffer, if a user is configured in a reporting mode (See pg. 3, paragraph [0032]).

11. In regards to claims 8 and 16, Naim discloses the method, and control channel wherein the user transmits the control channel in the reporting mode when the user is neither scheduled for uplink transmission nor transmitting autonomously while subject to an allowed data rate for uplink transmission (See pg. 3, paragraph [0032]).

12. In regards to claim 10, Naim discloses the control channel, wherein the sub-frame is comprised of a plurality of slots, each slot containing a plurality of fields of control information that differs based on the transmission mode of the user (See pg. 2, paragraph [0027] and pg. 3, paragraph [0032], lines 7-16).

13. In regards to claim 17, Naim discloses a control channel, wherein the user is in a reporting mode if there is no companion data on the uplink, in a rate-controlled transmission mode if there is no associated downlink transmission grant message received from a base station, and in a scheduling mode if there is an associated downlink transmission grant message received from the base station (See pg. 1, paragraph [0005]; pg. 1, paragraph [0012] – [0013]); pg. 2, paragraph [0025]; and pg. 3, paragraph [0032], lines 9-22).

14. In regards to claim 18, Naim discloses all of claim 18, except wherein the at least one sub-frame has a 2 ms transmission time interval. Naim, however, discloses a range or time interval for at least one sub-frame (See pg. 1, paragraph [0027] and pg. 2, paragraph [0032]). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate this feature within the system, as a way of further indicating a specific transmission time interval.

15. In regards to claim 19, Naim discloses the control channel, wherein the at least one sub-frame has a transmission time interval adapted to be changed based on a desired control channel design, and wherein the number of fields within a given slot of the sub-frame remains constant for any given transmission time interval (See pg. 2, paragraph [0027] and pg. 3, paragraph [0032]).

### ***Response to Arguments***

16. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Whinnett et al. (US Patent Application, Pub. No.: US 2004/0219919 A1) teach management of uplink scheduling modes in a wireless communication system. Toskala et al. (US 6,359,865) teach a method of implementing macrodiversity. Mantha et al. (US Patent Application, Pub. No.: US 2005/0157678 A1) teach a communication channel structure and method.

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2614

19. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to THJUAN K. ADDY whose telephone number is (571)272-7486. The examiner can normally be reached on Mon-Fri 8:30-5:00pm.

21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on (571) 272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2614

22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thjuan K. Addy/  
Primary Examiner, Art Unit 2614